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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/422,264	04/14/95	GERARDUS DE VRIES	J P/1034-54

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E3M1/0701

DOLAN, EXAMINER	
ART UNIT	PAPER NUMBER
2306	4/

DATE MAILED:

07/01/96

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Office Action Summary

Application No.

08/422,264

Applicant(s)

De Vries

Examiner

Robert J. Dolan

Group Art Unit

2306



☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-14 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-14 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Part III DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for priority based on an application filed in the Netherlands on 4/15/94. It is noted, however, that applicant has not filed a certified copy of the Dutch application as required by 35 U.S.C. § 119.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR § 1.84(f) which states, "The same character must never be used to designate different parts." However, "12" has been used to designate both a bus and a buffer in figure 1. Correction is required.

3. The drawings are objected to because they do not include certain reference signs mentioned in the description. 37 CFR § 1.84(f) states, "Reference signs not mentioned in the description shall not appear in the drawing and vice versa." The following reference signs are not included in the drawings: bus "4" in figure 1 referred to on page 4 line 13 of the specification. Correction is required.

Specification

4. The disclosure is objected to because of the following informalities:

"IDEE" on page 2 line 11 should read "IEEE",

the word "bot" on page 2 line 13 should read "bit",

the word "opperands" on page 2 line 18 should read "operands".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claims 4-6, 8 and 12-14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4-6 are merely functional statements without sufficient structure to accomplish the functions.

The phrase "or other connections" in claims 8 and 12-14 renders the claims indefinite because the claimed apparatus includes elements not actually disclosed (those encompassed by "or other connections") and the scope of the claims is unascertainable.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 6 is rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Cook et al. Cook discloses an N-bit shifter/rotator capable of shifting/rotating data words to the left or right. Further, Cook describes rotation of a 32-bit word using his invention.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

9. Claims 1-5, and 7-14 are rejected under 35 U.S.C. § 103 as being unpatentable over Birman et al in view of Witte.

With regard to claims 1, 3, 4, 5, 8 and 13, Figure 1 of Birman discloses a 64-bit circuit comprised of a multiplier unit, an arithmetic unit, register units and a supporting bus structure. Birman further discloses in column 3 lines 14-22 that the circuit is programmable via a register connected to the bus structure. Birman does not disclose the feature of adjustable word lengths for the multiplier or arithmetic logic units. Column 1 lines 43-47 of Witte teach that the word lengths for both the multiplier and the arithmetic logic units may be adjusted to lengths less than the maximum length of each unit via the use of masks. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize masks as taught by Witte in the circuit by Birman in order to, as discussed by Witte in column 1 lines 37-39, increase the processing speed of the circuit.

With regard to claims 2, 9, and 12, the multiplier of Birman discloses a three-step pipeline in the multiplier in comparison to the applicant's claimed five-step pipeline. However, in addition to the above argument for claim 1, a pipeline is defined by more than the number of stages or steps it contains. A claim simply of a five-step pipeline without definition of each step does not constitute a patentable difference over the prior art.

With regard to claims 7 and 14, Birman does not disclose the implementation of the circuit in integrated form. However, in addition to the above argument for claim 1, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

implement the circuit in integrated form since it was well known in the art that numerous benefits, such as reduced physical size, exist for integrated circuits.

With regard to claim 10, Birman does not disclose the implementation of the circuit in integrated form. However, in addition to the above argument for claim 2, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the circuit in integrated form since it was well known in the art that numerous benefits, such as reduced physical size, exist for integrated circuits.

With regard to claim 11, Birman does not disclose the implementation of the circuit in integrated form. However, in addition to the above argument for claim 3, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the circuit in integrated form since it was well known in the art that numerous benefits, such as reduced physical size, exist for integrated circuits.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ashkenazi discloses an adder for adding 64-bit, 16-bit and 8-bit words.

Cotton discloses a processor with variable length multiply capability.

Chevillat et al discloses an arithmetic device with an arithmetic logic unit and pipeline multiplier in parallel.

Niimi discloses a barrel shifter with a rotation function which is capable of shifting/rotating an n-bit word to the left or right.

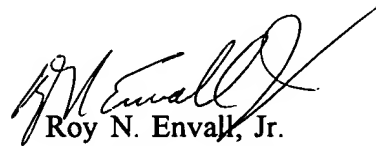
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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Dolan whose telephone number is (703) 305-2875.



Robert J. Dolan
Patent Examiner
Art Unit 2306



Roy N. Envall, Jr.
Supervisory Patent Examiner
Art Unit 2306